

## **CETL-MSOR Conference 2015**

### **Zainab Munshi, Davide Penazzi and Jo McCreedy-Fallon: Challenging the dominant discourse in first year's mathematics students in approaching their own studies.**

Starting university is a huge step for most students. The well documented 'gap' between Further and Higher Education provides students with several figurative 'walls' to overcome and adapt to. Many of these walls are curriculum based, for example writing formal proofs and higher levels of abstraction in algebra modules; other challenges arise from the novel independence both in private life and on managing one's own learning. Independence, resilience, communication and collaboration are some of the essential attributes identified by end of second-year Mathematics students, i.e. students that have successfully completed this 'Threshold' first year of study. We argue it is not the difficulty of the new concepts and materials that hinders retention of first year mathematics undergraduates, but their inability to adapt their own learning and to develop a reflective approach to their own studies.

Our project aims to utilise feedback from second year mathematics undergraduates, mathematics staff and academic literature in the shaping of an outdoor education package. This course aims to isolate and develop the key skills and attributes essential for an efficient and successful transition from A-level to Higher Education mathematics. This will be achieved by an inter-departmental delivery team of mathematicians and outdoor facilitators, utilising reflective practice and experiential learning episodes to provide a student centered programme. This project also has scope for future development of the use of the Outdoors in facilitating the transition of first year undergraduates in other institutions and subject areas with a framework for future development of these ideas.

We will use a specific mathematical skill: being able to solve new problems for which a standard method is not given; to guide us through the aspects of this programme: its interaction with key learnacy skills and how it can help students to adapt to a university level education.